

REMARKS

After entry of the foregoing amendment, claims 1-12 and 16-32 are pending in the application.

The Examiner is thanked for his careful review of the specification. The errors noted by the Examiner have been rectified by the foregoing amendment. Other minor changes have also been made.

The cited indefinitenesses in the claims have also been redressed by amendment. (Although the Action refers to claim “steps,” no § 112, ¶ “step” is intended in any of the claims. The reference to “steps” in claim 17 has been deleted.)

Claims 13-15 have been canceled as substantially redundant with claims 8-10.

Claims 5, 16 and 19 were indicated as containing allowable subject matter, and have been amended to avoid dependence on rejected base claims. (Changes believed inconsequential to patentability have also been made. For example, claim 16 no longer includes the act “producing a physical image which includes a hidden reference signal.” Instead, the claim now refers to “capturing a plurality of low resolution electronic images of a subject, the subject defining a hidden reference signal.”) Allowable subject matter was also indicated in claim 11, subject to correction of the indefiniteness issues.

Accordingly, claims 5, 11, 16 and 19 are now believed to be in condition for allowance.

The remaining claims stand rejected as anticipated by, or obvious in view of, Honjoh (6,466,253).

Although aspects of Honjoh – if viewed at a high enough level of abstraction – may appear similar to certain aspects of applicants’ work, there are many differences between his technology and that detailed in the present specification. Certain of the claims have been amended to emphasize various of these distinctions.

For example, Honjoh is understood to treat all of his plural frames as a single group – processing them all similarly to yield the higher resolution image. In the combinations defined by certain of the amended claims, in contrast, the low resolution frames are grouped into different sets, and the different sets are used to enhance data at different locations of the high resolution image frame.

Likewise, Honjoh is understood to make use of data from *all* of his captured image frames. (As noted at Honjoh, col. 7, lines 24-55, a relative displacement $\Delta(n_i)$ is determined for each of the image frames. At col. 8, lines 4-14, he explains that all of the images are virtually moved by their respective displacement amounts $\Delta(n_i)$ to effect overlapping, to create a single high resolution image.) Certain of applicants' claimed arrangements (e.g., amended claim 8), in contrast, do not make use of data from all of the captured image frames (i.e., as is evident from the specification at the middle of page 6, the "remaining images" form no part of the "four 'averaged' images.")

Claim 12 is rejected over Honjoh in view of Glotzbach. Applicants have amended this claim to emphasize that construction under § 112, ¶6 ("means plus function") is intended. Formerly, such limitations were construed to read on any possible means for performing the specified function. As noted in MPEP § 2181, the *Donaldson* case has now made clear that such limitations should now be construed only to cover the particular arrangement disclosed in the specification, and structural equivalents. Applicants respectfully submit that, when given this more narrow interpretation, the cited art does not render obvious the arrangement defined by claim 12.

Independent claim 17 has been rewritten to include the "watermark" limitation of dependent claim 18, which is now canceled. The Action correctly notes Tian's teachings of watermarks. However, the combination of Honjoh and Tian does not appear to be based on a teaching or suggestion from either reference, or elsewhere in the art, leading to the combination. Rather, the motivation for combination seems premised on a hindsight view that the arrangement claimed yields an advantageous result.

Moreover, the stated rationale seems to lead to a conclusion that image alignment be effected by *two* signals – the characteristic contour pattern of Honjoh, and the watermark of Tian. The claimed arrangement does not require two such signals.

Still further, Tian does not teach use of a watermark signal to align *two or more* images to each other. Rather, his watermark is used to determine rotation, scale and rotation to which a *single* image has been subjected after encoding, so that these geometric operations can be taken into account prior to decoding of that single image.

No art-based rejection appears to have been made of claim 20. This claim is characterized, e.g., by image alignment based *both* on a hidden reference signal, and on visible image content. Again, the art fails to suggest such an arrangement.

New claims have been added to more fully protect applicants' inventive work.

In view of the foregoing amendments and remarks, favorable reconsideration and passage to issuance are solicited.

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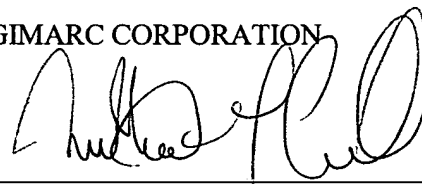
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Respectfully submitted,

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By

A handwritten signature in black ink, appearing to read 'William F. Conwell', written over a horizontal line.

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